

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
4 November 2004 (04.11.2004)

PCT

(10) International Publication Number
WO 2004/094325 A1

- (51) International Patent Classification⁷: C03B 37/04, (37/075)
- (81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (21) International Application Number: PCT/FI2004/050048
- (22) International Filing Date: 22 April 2004 (22.04.2004)
- (25) Filing Language: Finnish
- (26) Publication Language: English
- (30) Priority Data: 20030601 22 April 2003 (22.04.2003) FI
- (71) Applicant (*for all designated States except US*): LIEKKI OY [FI/FI]; Sorronrinne 9, FI-08500 Lohja AS (FI).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): JANNA, Kauko [FI/FI]; Maisterinkatu 12, FI-33720 Tampere (FI). FORSBLOM, Tomi [FI/FI]; Havumetsäkatu 2 B 23, FI-33820 Tampere (FI). RAJALA, Markku [FI/FI]; Klaavuntie 9 A 3, FI-00910 Helsinki (FI). VALKONEN, Harri [FI/FI]; Suopurontie 1 B 8, FI-02920 Espoo (FI).
- (74) Agent: TAMPEREEN PATENTTITOIMISTO OY; Hermiankatu 12 B, FI-33720 Tampere (FI).

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

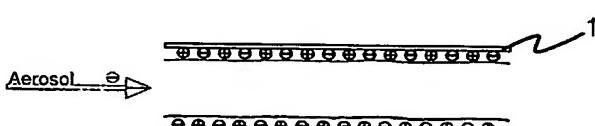
Published:

- *with international search report*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2004/094325 A1

(54) Title: A METHOD AND A MANUFACTURING APPARATUS FOR MANUFACTURING A FIBER PREFORM



(57) Abstract: Method and manufacturing apparatus for forming one or several material layers inside a basic tube (1), which basic tube is used in the manufacture of an optical fiber preform. The surface inside the basic tube (1) is charged electrically by guiding a first electrically charged gas flow inside the basic tube, whereafter a second electrically charged gas flow is guided in the basic tube, said gas flow containing material particles, and the sequentially alternating first gas flow and second gas flow have opposite charges.